

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
NONPROVISIONAL PATENT APPLICATION

Title: INFANT SLEEP SUPPORT

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TECHNICAL FIELD

The present invention relates generally to devices for positioning an infant while the infant is sleeping. More particularly, the present invention relates to an infant sleep support for reducing the risk of sudden infant death syndrome.

BACKGROUND OF THE INVENTION

In the United States, it has become considered advisable to position infants so that they will sleep supine, i.e., on their sides or backs, because of a link between an increased risk of Sudden Infant Death Syndrome (SIDS) and the prone position. SIDS is a puzzling affliction that strikes infants without warning and wherein an infant suddenly stops breathing for reasons that are still not understood and that do not show up on autopsies. During the 1990's in the United States, there

was a death rate from SIDS of about 1 in every 2,000 infants. SIDS kills an estimated 6,000 infants yearly.

Infants, particularly infants under the age of about nine months, often need to be placed on substrates, particularly flat surfaces, such as for example, the floor, on the upper surface of a crib or bed, or even in a stroller or the like. If the infants are unsupported or unrestrained, there is a chance that through movement, such as for example kicking, they could roll or otherwise move into a position which is more dangerous than the original position in which they were situated, such as the prone position.

Attempts have been made to severely restrict or prevent the infant from moving, including placing pillows, bolsters, cushions or the like on either side of the baby to form a barrier, restraint or the like. Such loose and temporary supports are temporary in effect, and the infant can roll under the loose support or can move the temporary support out of the way, or move to a position where the support or restraint is no longer effective. This is particularly so of adjustable supports or supports that have portions which are adjustable.

Previously, an attempt to address the problems associated with such temporary loose supports was made with the so-called

"U-pillow," which is generally a pillow in the shape of a U, having two more or less tapering side arms connected on either side of a rear portion, in which a gap or space is defined between the arms and the rear portion. The infant is placed in this gap or space.

Although U-pillows provide some support and restrain the infant from sideways movement, due to the shape and design of the U-pillow the infant often is able to slide off or burrow underneath the rear portion of the U-pillow so that the rear support section of the U-pillow becomes located over the face and head region of the infant. In this position, there is a chance that the infant will suffocate, or at least become distressed, particularly if the child is left unattended even for short periods of time.

Other supports for infants and other persons have been developed, including U.S. Pat. No. 4,136,859, which describes an infant holder that includes a sheet of flexible material elevated above a table surface and having corners thereof attached to spring biased rotatable arms. When an infant is placed on the sheet, the arms rotate over the infant as the infant is lowered to the table surface, arcuately cradling the infant and holding the infant in place. This device is

intended for the temporary placement therein of an infant and would not be comfortable for long periods.

U.S. Pat. No. 5,189,748 discloses an infant side support sleeper that includes a base pad having attached thereto a waterproof post and pillow casings. A wedge shaped foam or fiber insert is removably inserted in the pillow casing and a vertical oval foam or fiber insert is removably inserted in the post casing. The inserts are removable so that the base pad with the casings attached thereto can be laundered when they become soiled. The pillow and post casings are spaced apart such that an infant lying on its side therebetween will have its back against the pillow and its abdomen against the post. The distance between the pillow and the post is adjustable by means of folding or unfolding tucks in the base pad. However, the distance adjusting means fails to provide positive locking of the pillow and post at a predetermined distance, and the tucks could easily become unfolded in use.

U.S. Pat. No. 5,193,238 discloses an infant support pillow which includes two symmetrical, spaced apart supports having facing, straight, parallel, vertical inner surfaces, the distance between the supports being adjustable by overlapping layers of material attached to the lower edges of the supports and having therebetween interlocking Velcro

fabric strips. An infant is held between the two supports by means of a strap extending over the infant from one support to the other. The device appears to be uncomfortable for an infant, as the infant could move its arms only with difficulty and the infant could not assume the normal comfortable fetal position.

Accordingly, U-pillows and other prior art sleep supports suffer from a number of deficiencies. Thus, there is a need to address these deficiencies by providing an infant sleep support device that is sufficiently restrictive against rollover in infants while permitting good mobility, and is releasably engaged to the infant's clothing or a support thereon.

SUMMARY OF THE INVENTION

The present invention eliminates the above-mentioned needs for an infant sleep support device by providing an infant sleep support device that is sufficiently restrictive against rollover in infants while permitting good mobility, and is releasably engaged to the infant's clothing or a support thereon.

In accordance with the present invention, there is provided an infant sleep support device including an

adjustable strap member and a plurality of movement restrictors releasably secured to the adjustable strap member.

The present invention is additionally directed to an infant sleep support device including a clothing article, a first attachment member positioned on the clothing article, a second attachment member positioned on the clothing article opposite the first attachment member, a first movement restrictor having a third attachment member for releasably engaging the first attachment member, and a second movement restrictor having a fourth attachment member for releasably engaging the second attachment member.

The present invention is further directed to a method for forming an infant sleep support, the method including the steps of attaching a first attachment member to a clothing article, attaching a second attachment member to the clothing article opposite the first attachment member, and providing at least one movement restrictor having a third attachment member for releasably engaging the first or second attachment member.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGURE 1 is a top view illustration of the preferred embodiment of the present invention.

FIGURE 2 is a top view illustration of an alternative embodiment of the present invention of FIGURE 1.

FIGURE 3 is a top view illustration of an alternative embodiment of the present invention of FIGURE 2.

DETAILED DESCRIPTION OF THE DRAWINGS

Referring now to Fig. 1, a preferred embodiment of the present invention is illustrated as infant sleep support 10. Infant sleep support 10 includes cross-strap 12 and adjustable strap member 14.

Adjustable strap member 14 permits the parent user to provide a snug fit for infant sleep support 10 on an infant. Such a fit reduces the chance that the infant will remove or otherwise displace infant sleep support 10 from the desired position.

Adjustable strap member 14 further includes attachment members 15 and 17 for releasably securing movement restrictors 16 and 18. Attachment members 15 and 17 can be selected from any one of the vast arrays of fastener types known in the art,

including but not limited to hook and loop, snaps, clips, and the like.

Movement restrictors 16 and 18, as well as movement restrictors 116, 122, 216, and 220 of Figs. 2 and 3, respectively, although shown as cubic in shape, are not bound to such limiting geometry. Movement restrictors 16 and 18, as well as movement restrictors 116, 122, 216, and 220 of Figs. 2 and 3, respectively, can incorporate any shape that restricts rotation of the infant along the infant's longitudinal axis.

As illustrated in Fig. 1, movement restrictors 16 and 18 are releasably secured to adjustable strap member 14 at attachment members 15 and 17, respectively. The amount of force required to release movement restrictors 16 and 18 from attachment members 15 and 17, respectively, is greater than that which can be produced by the infant, thereby insuring that movement restrictors 16 and 18 remain secured to adjustable strap member 14. Movement restrictors 16 and 18 are releasably secured in order to permit the parent user to more easily transport and use infant sleep support 10. Moreover, movement restrictors 16 and 18 are inflatable and deflatable, thus ensuring that minimal storage space is required.

Referring now to Figs. 2 and 3, an alternative embodiment is illustrated as infant sleep supports 100 and 200. Infant sleep support 100 includes a clothing article 110, a first attachment member 112 positioned on clothing article 110, a second attachment member 114 positioned on clothing article 110 opposite first attachment member 112, a first movement restrictor 116 having a third attachment member 118 for releasably engaging first attachment member 112, and a second movement restrictor 122 having a fourth attachment member 120 for releasably engaging second attachment member 114.

Infant sleep support 200 includes a clothing article 210, a first attachment member 212 positioned on clothing article 210, a second attachment member 214 positioned on clothing article 210 opposite first attachment member 212, a first movement restrictor 216 having a third attachment member 218 for releasably engaging first attachment member 212, and a second movement restrictor 222 having a fourth attachment member 220 for releasably engaging second attachment member 214.

By providing clothing articles 110 and 210 with integrated first attachment members 112 and 212 and second attachment members 114 and 214, the potential problem of correct adjustment of adjustable strap member 14 is

eliminated. Additionally, attachment members may be provided on patches to other substrates and then sewn or otherwise attached to clothing articles 110 and 210.

As with attachment members 15 and 17 of Fig. 1, Attachment members 112, 114, 118, 120, 212, 214, 218, and 220 can be selected from any one of the vast arrays of fastener types known in the art, including but not limited to hook and loop, snaps, clips, and the like.

Additionally, as with movement restrictors 16 and 18 of Fig. 1, movement restrictors 116,122, 216, and 220 are releasably secured to clothing article 110 and 210, respectively, at attachment members 112 and 114, and attachment members 212 and 214, respectively. As stated previously with respect to Fig. 1, the amount of force required to release movement restrictors 116,122, 216, and 220 from attachment members 112 and 114, and attachment members 212 and 214, respectively, is greater than that which can be produced by the infant, thereby insuring that movement restrictors 116,122, 216, and 220 remain secured to clothing articles 110 and 210, respectively.

Movement restrictors 116,122, 216, and 220 are releasably secured in order to permit the parent user to more easily transport and use infant sleep support 100 and 200. Moreover,

as previously discussed regarding Fig. 1, movement restrictors 116, 122, 216, and 220 are inflatable and deflatable, thus further ensuring that minimal storage space is required.

Furthermore, by providing attachment locations for movement restrictors on the infant's clothing, fewer articles need to be carried by the parent.

Although only a few exemplary embodiments of the present invention have been described in detail above, those skilled in the art will readily appreciate that numerous modifications are to the exemplary embodiments are possible without materially departing from the novel teachings and advantages of this invention. Accordingly, all such modifications are intended to be included within the scope of this invention as defined in the following claims.